Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A routing control method of a local area network (LAN) comprising one or more terminals having at least one LAN interface, one or more routers having a routing function performing a relay of data between the LAN and an external network, and a LAN medium connecting the terminals and routers mutually, the routing control method ~~characterized in that~~ comprising:

first multicasting, by a first router of the one or more routers, a routing stop message indicating the routing function of the first router is to stop or has stopped, ~~if~~ the multicasting of the routing stop message being responsive to the routing function of the router ~~is~~being disabled or being predicted to become disabled~~,~~ during execution of the routing function; ~~the router multicasts a routing stop message notifying stop of its routing function,~~

after the first multicasting of the routing stop message,~~which~~ second multicasting, by another of the routers,~~having received the routing stop message, multicasts~~ a routing capability message,

wherein the another router is one of the routers that has received the routing stop message and the second multicasting is responsive to ~~when~~ the another router being capable of executing ~~can execute~~ the routing function, so that the routing function is switched to the another router.

2. (Currently Amended) A routing control method comprising:

~~a step that~~monitoring, by a first router,~~monitors the~~ a status of a connection with an external network and when ~~it is decided to cancel~~ the connection is to be cancelled, transmitting, by the first router,~~transmits~~ a message notifying a routing stop time, ~~the~~as a time remaining until a stop of a routing function of the first router, to ~~the~~ nodes in ~~the~~ a local area network to which the first router is connected;

~~a step that~~receiving, by a second router, ~~receives~~ the routing stop message, and if the second router ~~can execute~~is capable of the routing function, ~~it~~transmitting, by the second router, ~~transmits~~ a routing capability message notifying ~~the~~a transition time, as~~the~~ a time ~~required~~ to enable the routing function of the first router, to the nodes in the local area network to which the second router is connected; and

~~a step that~~switching, by the nodes receiving the routing stop message and the routing capability message, ~~switch the~~ a destination of ~~their~~ transmissions from the first router ~~over~~ to the second router.

3. (Currently Amended) ~~A~~The routing control method according to claim 2, including:

~~a step that~~ if the first router receives a further message directed toward an external network after the stop of ~~its~~the router function of the first router, ~~stores~~storing, by the first router, the further message; and

~~a step that~~ after the first router receives the routing capability message from the second router, ~~transfers~~ transferring, by the first router, the stored message to the second router.

4. (Currently Amended) ~~A~~The routing control method according to claim 3, wherein after the first router receives the routing capability message, ~~it transfers~~transferring, by the first router, the stored message to the second router after ~~the~~a routing capability time has lapsed.

5. (Currently Amended) AThe routing control method according to claim 2, ~~wherein~~further comprising:

deciding, by the second router, ~~decides~~ that the routing function of the first router has stopped if the routing stop time in the message received from the first router is equal to or smaller than a predetermined time.

6. (Currently Amended) A router comprising:

a stop message receiving section for receiving a routing stop message ~~giving~~indicating ~~the~~a routing stop time, as ~~a~~the time remaining until a stop of a routing function, from another router which is executing the router function;

a master transition deciding section for deciding whether or not ~~a~~the router ~~can~~is capable of executing ~~execute~~ the routing function when the message receiving section receives ~~a~~the routing stop message;

a transition time calculating section for calculating ~~the~~a time ~~required~~ to start the routing function when the master transition deciding section decides that the routing function is capable of being ~~can be~~ executed;

a routing capability message generating section for generating a routing capability message notifying the ~~required~~ time until the routing function is enabled; and

a capability message transmitting section for transmitting the routing capability message to ~~the~~ nodes in ~~the~~a local area network to which the router is connected.

7. (Currently Amended) ~~A~~The router according to claim 6, further including:

a status monitor section for monitoring ~~the~~a status of a connection with an external network and deciding whether or not to cancel the connection;

a routing stop time calculating section for calculating the routing stop time remaining until the ~~routing~~ stop of the routing function of the router when the status monitor section decides to cancel the connection during execution of ~~a~~the routing function;

a routing stop message generating section for generating ~~a~~the routing stop message ~~giving~~indicating the time calculated by the routing stop time calculating section; and

a stop message transmitting section for transmitting the routing stop message to ~~a~~one of the nodes on ~~a~~the local area network to which the router is connected.

8. (Currently Amended) ~~A~~The router according to claim 7, further including:

a buffer for storing a message to be sent to ~~the~~an external network, received from the local area network to which the router is connected after the ~~stop of~~ routing function is stopped, and

a capability message receiving section for receiving ~~a~~ the routing capability message from the another router,

~~whereby~~wherein, when the routing capability message is received, the message stored in the buffer is transmitted to ~~the~~a further router which ~~was~~is a ~~the~~ source of the message.

9. (Currently Amended) ~~A~~The router according to claim 7, wherein the routing stop message is a router advertisement message of ICMPv6 and has the routing stop time set in ~~the~~a lifetime field thereof, and the routing stop message is sent to the nodes in the ~~LAN~~local area network.

10. (Currently Amended) ~~A~~The router according to claim 7, wherein, if the routing stop time in the routing stop message received is equal to or smaller than a predetermined time, ~~it is decided that~~ the router, which ~~was~~is ~~the~~ a source of the routing stop message, is under transition ~~into a~~to stop ~~of~~ the routing function.

11. (Currently Amended) ~~A~~ The router according to claim 7, wherein the routing capability message is a router advertisement message of ICMPv6 and the time ~~required~~ until the routing function is enabled is set in ~~the~~a reachable time field thereof, and the routing ~~capacity~~ capability message is sent to the nodes in the ~~LAN~~local area network.

12. (Currently Amended) A terminal comprising:

a terminal receiving section for receiving a routing stop message ~~giving~~indicating a routing stop time, as ~~the~~a time remaining until a stop of a routing function from a first router ~~now~~currently executing the routing function, and a routing capability message ~~giving~~indicating a routing capability time, as a~~the~~ time ~~required~~ until the routing function by a second router is enabled; and

a router switch section for switching a communication to be sent to an external network from the first router ~~over~~ to the second router by a timing depending upon the routing stop message and the routing capability message received by the terminal receiving section.

13. (Currently Amended) ~~A~~The terminal according to claim 12, wherein the switching by the router switch section ~~is done~~occurs after ~~the~~a lapse of the routing stop time and ~~at the~~a lapse of the routing capability time.